## **Cumulative Index 1987**

## Volume 5

March OUTPATIENT ANESTHESIA, pages 1–244

June ANESTHESIA FOR PATIENTS WITH ENDOCRINE DISEASES, pages 245–462

September PRACTICAL NEUROANESTHESIA, pages 463–693

December POSITIVE AIRWAY PRESSURE THERAPY: PPV AND PEEP, pages 695–913

Note: Page numbers of issue and articles are in boldface type.

Acid-base balance, in eucapnic ventilation, 730–731

Acromegaly, endocrine abnormalities and, 525-526

Acute lung injury (ALI), alveolar hyperoxia and, 801

and PEEP, NCE/ARDS spectrum in, 797-800

clinical spectrum of, 798, 800 PEEP therapy in, 797-806

clinical end points of, 803-804 practical approach to, 804-806

toxic oxygen radicals and, 800–801 Acute ventilatory failure, impending, PPV for, 718–719

ventilator muscle fatigue and, 722–725 pathogenesis of, 719–722

PPV for, 718
Addison's disease, causes and characteristics
of, 252-253

Adenoidectomy, complications of, 140-141 Adrenal cortex, function of, effect of etomi-

date on, 259-261 in elderly, 258-258

Adrenergic receptor(s), interactions among, 418-420

Adrenocortical hormone(s), abnormalities in secretion of or responsiveness to, patients with, 245-267

deficiency of, 252-254

excess, results of, 249-252 physiology of, 245-249

Adrenocorticotropic hormone (ACTH), effects of anesthesia on, 443–445

Adult respiratory distress syndrome (ARDS), PEEP for, 789–790

Airway pressure monitor(s), 851-853

Airway resistance, increased, and impending ventilatory failure, 723

Aldosterone, physiology of, 248-249 Alfentanil, for outpatient surgery, 43

ALI. See Acute lung injury. AMV. See Ventilation, assist mode.

Analgesia, postoperative, pediatric outpatient anesthesia and, 90-91

regional, for postoperative pain, in pediatric outpatient surgery, 91 stimulation, for chronic pain relief, 626–

Analgesic(s), for pediatric outpatient postoperative pain, 90–91

for recovery room pain, 120-121

Androgen(s), physiology of, 249 Aneroid manometer, 852

Anesthesia, effect on endocrine system, 443–458

effect on sympathetic nervous system function, 411–442

for neurosurgery, anesthetic agents for, 531-540

Anesthesia (Continued) for peripheral nerve surgery, 603-608 for spinal surgery, management of, 587inhalational, for pediatric outpatient surgery, 81-82 outpatient, caudal, for pediatric surgery, monitoring in, 60-61 technique of, 58-59 complications of, 141-147 current status of, 11-12 dental, 167-185. See also Dental outpatient anesthesia. for pain problems, 187-200 future of, 217-225 general, 35-52 emergence from, 49 general preparations for, 35-37 inhalational agents for, 44-45 inhalational techniques of, 44 intubation and relaxants in, 47-48 maintenance of, 48 methods of induction of, 45-47 monitoring equipment for, 36 premedication for, 37-41 recovery room procedures in, 50 history of, 1-13 intravenous, 41-43 issue on. 1-240 legal considerations of, 227-240 informed consent, 233-235 maintenance of equipment, 238 medical record documentation, 235medical staff relationships, 236-238 patient selection, 231 patient-physician relationship, 238-

preoperative evaluation, 231-232 timely discharge, 232-233 pediatric, advantages of, 73 anesthetic agents and techniques of, 80-89 breathing systems for, 86-87 disadvantages of, 73-74 follow-up in, 92-93 management of, 73-95

postoperative analgesia and, 90-91 preoperative preparation for, 79-80 preoperative requirements and screening in, 75-79 recovery and discharge criteria in, 91 - 92

pharmacologic management for, 80

selection process in, 74-75 regional, 97-111 disadvantages of, 98-100

equipment for, 103-104 for pediatric surgery, 53-72 general principles of, 100-104 intraoperative sedation for, 102-103 intravenous, 109 patient selection and preparation preoperative sedation in, 101-102

spinal, discharge criteria following, 131-132

regional, effect on stress response, 426surgical, HFV for, 878-879

Anesthesia ventilator(s), vs. critical care ventilators, 859-864

Anesthetic monitoring, during neurosurgery, 463-475

Aneurysm(s), cerebral, fluid and electrolyte management in patients with, 499-501 intracranial, anesthetic agents for, 537-

clipping of, postoperative care, 647-648 of vein of Galen, in children, surgery for, anesthetic management during, 560-

Antacid(s), in outpatient surgery, 38-39 Anticholinergic(s), in outpatient surgery, 38 Antidiuretic hormone (ADH), abnormalities of, anesthetic considerations for, 405-

physiology and pharmacology of, 430-436 secretion and actions of, factors affecting, 397-398

Antihistamine(s), in preanesthetic preparation for outpatient surgery, 41

Apnea, PPV for, 718

Aprotinin, in inhibition of kinin synthesis, 320-321

ARDS. See Adult respiratory distress syn-

Argenine vasopressin, physiology and pharmacology of, 430-436

Arteriovenous malformation, 599 Atracurium, for outpatient surgery, 47

Barbiturate(s), for neuroanesthesia, 531-532 in preanesthetic preparation for outpatient surgery, 40

Bennett monitoring spirometer, 850 Benzodiazepine(s), for dental outpatient surgery, 175-176

for neuroanesthesia, 532 for preoperative sedation, 102

in preanesthetic preparation for outpatient surgery, 40 Beta-endorphin, effects of anesthesia on,

449-452 intrathecal and epidural administration of,

Bleeding, following spinal surgery, 600 Blood pressure, arterial, effect on evoked potentials, 484-485

Blood-brain barrier (BBB), movement of water and solutes across, 492-495

Brain, development of, 541-542 normal, glucose consumption in, 658 physiology of, 542-545

Brain covering(s), injury to, treatment of,

Breathing system(s), pediatric anesthesia, 86-87

Bronchospasm, intraoperative, in carcinoid patients, 326-327

Bupivacaine, for caudal blocks in pediatric outpatient surgery, 59

Butyrophenome(s), in preanesthetic preparation for outpatient surgery, 40

Calcitonin, for hyperparathyroidism, 290 Capnography, 846-847

Carcinoid heart disease, 330-331

Carcinoid syndrome, 313-337 intraoperative complications, 325-332 manifestations of, 313

ovarian tumors and, 370 role of histamine in, 321-323

role of kinins in. 319-321 role of serotonin in, 314-317

treatment of, inhibition of serotonin synthesis in, 318

vs. carcinoid tumor, 313-314

Carcinoid tumor(s), anesthetic implications

hormone release by, prevention of, 324-325

leukocyte interferon for, 322-323

prevention of tumor product release, 323-

symptoms of, causes of, 314-323 vs. carcinoid syndrome, 313-314

Carcinoma(s), thyroid nodules and, 282-283 Cardiac function, and PPV, 829-830

Cardiac output state(s), low, and impending ventilatory failure, 724

Cardiac state(s), hyperdynamic, and impending ventilatory failure, 724-725

Cardiac system, abnormalities in, following central nervous system derangements, 507-519

central nervous system trauma and, 571-

Cardiopulmonary bypass surgery, insulin administration for, 351-352

Cardiovascular stabilization, with PPV, 727-

Cardiovascular system, changes in, following neurosurgery, 644-646

disturbances in, during spinal shock, 594 function of, following spinal surgery, 600

Carotid artery surgery, effect of diabetes mellitus on, 346

Carpel tunnel syndrome, surgical anesthesia for, 605-606

Catecholamines, 411-418

storage and release of, 416-417 synthesis and storage of, 413-416

Catheterization, arterial, 831-832 pulmonary artery, 832-834

Causalgia, diagnosis and management of, 193-194

Central nervous system, changes in, following neurosurgery, 647

Central nervous system derangements, cardiorespiratory effects of, 507-519

Central nervous system opiate therapy, for chronic pain relief, 632-633

Central nervous system trauma, 565-585. See also Head trauma, Spinal cord injury(ies).

incidence of, 565-566

Cerebral blood flow, in eucapnic ventilation, 731

Cerebral vasospasm, management of, following neurosurgery, 641-642

Cervical laminectomy(ies), anesthetic implications for, 597-599

Cervical spondylosis, anesthetic implications for, 597-599

Chest, radiographs of, for outpatient surgery, 22-28

Children, dental outpatient anesthesia for, 181 - 183

outpatient anesthesia for, fluid management during, 88-89 management of, 73-95 monitoring of, 87-88

regional, 53-72. See also Anesthesia. outpatient, regional.

Children's Hospital National Medical Center, outpatient procedures at, 76 outpatient surgery at, caudal anesthesia for, 55-61

regional anesthesia for, 53-72 Cholecystectomy, effect of diabetes mellitus

on, 344-345 Chronic pain, neurosurgical interventions

for, 609-638 in benign conditions, 611

in cancer patients, 610-611

Chvostek's sign, 284, 292

Cimetidine, in preanesthetic preparation for outpatient surgery, 39

Circle absorption system, for pediatric patients, 87

Circulation, monitoring of, during neurosurgery, 469-471

Clonidine, to reduce flushing in carcinoid tumor patient, 325

Closing volume, alterations in, PEEP and,

CMV. See Ventilation, control mode.

Conn's syndrome, as result of mineralocorticoid excess, 251-252

Continuous mixed venous oxygen saturation, 834-835

Continuous positive airway pressure (CPAP), and ventilatory weaning, 754 mask, 794–795

Continuous positive airway pressure (CPAP) systems, 768–770

Continuous wave Doppler ultrasound, 830 Cordotomy, 599

for chronic pain relief, 616-620

Coronary artery bypass surgery, effect of diabetes mellitus on, 345-346

Corticoid supplementation, perioperative, risks of, 256–257 perioperative stress and, 254–256

Corticotropin, ectopic production of, 386-

Cortisol, in elderly, 258-259 physiology of, 245-247

Cranial nerve palsies, following neurosurgery, 647

Craniosynostosis, pediatric neurosurgery for, 557-559

Critical care medicine, HFV for, 879–884 Croup, postintubation, in ambulatory surgery recovery room, management of, 123–125

Cubital tunnel syndrome, surgical anesthesia for, 606

Cushing's disease, endocrine abnormalities and, 524

Cushing's syndrome, characteristics of, 249-251

reproductive tumors and, 368–369 Cyproheptadine, for carcinoid syndrome, 319

Deadspace ventilation, alterations in, PEEP and, 780

Deafferentation pain, dorsal root entry zone lesioning for, 616

Deep brain stimulation (DBS), for chronic pain relief, 628-629

Dehydration, euvolemic, in pediatric neuroanesthesia, 544

Dental outpatient anesthesia, 167-185 balanced intravenous technique of, 177-178 equipment for, 173-175

evaluation and selection for, 169–170 for conscious sedation, 175–176 for deep sedation, 176–177

general, considerations for, 179–180 endotracheal intubation and, 180–181

porgensen technique of, 178–179 monitoring in, 171–172 morbidity and mortality in, 168–169 pediatric, 181–183 preoperative preparation for, 170–171 Shane technique of, 179

Diabetes insipidus, nephrogenic, 402 vasopressin deficiency and, 400–402

Diabetes mellitus, 339–356 altered wound healing in, 343 and ambulatory surgery, 149 and emergency surgery, complications of, 352–354

anesthetic implications of, 346–354 complications of, 342

effect on surgery, 344-346 infection in, 343

perioperative management of, 348-352 perioperative management of hypergly-

cemia and cerebral ischemia in, 343-344

Types I and II, 341-342

Diabetic coma, hyperglycemia, hyperosmolar, nonketotic, 342

Diaphragm-type exhalation valve PEEP device, 766

Diazepam, effect on evoked potentials, 483 in ventilatory care, 732–733

Diisopropylphenol, for outpatient surgery, 42

Dilantin, effect on evoked potentials, 484 Dilatation and curettage, complications of, 140

Discharge criteria, following outpatient surgery, 129–133

Discharge examination, following outpatient surgery, 133

Diuretic agent(s), in fluid and electrolyte management in neurosurgical patients, 495-502

Dorsal column stimulation, for chronic pain relief, 627–628

Dorsal root entry zone (DREZ) lesioning, for deafferentation pain relief, 616 Down's syndrome, spinal fusion for, 591

Droperidol, effect on evoked potentials, 483 for postoperative nausea and vomiting, 122

in preanesthetic preparation for outpatient surgery, 40-41

Drug therapy, complications of, and ambulatory surgery, 150-151

Dysesthesia, following analgesic neurosurgery, 612

Dysrhaphism, spinal and cranial, pediatric neurosurgery for, 551-553

EACA, in inhibition of kinin synthesis, 321 Echocardiography, 830–831 Ectopic bernote secretion, 379–394. See

also Ectopic hormone syndrome. tumors resulting from, types of, 380-383 Ectopic hormone syndrome(s), neurologic disorders in, 381

pathogenesis and classification of, 380–383 recent etiologic developments in, 386–390 tumors in, 380–383

vascular disorders in, 386

Electroencephalographic monitoring, intraoperative, 485-487

Electrolyte imbalance, following spinal cord injury, 581

Electrophysiologic measurements, intraoperative evoked potential monitoring in, during neurosurgery, 477-489

Emergency surgery, in diabetics, and ketoacidosis, 352-354

Emerson Water Column, 761-763

End-inspiratory pause (inflation hold), 733–734

Endocrine disease, anesthesia for, issue on, 254-458

Endocrine function, effect of anesthesia on, 411–442

effect of anesthetic-adrenergic interactions on, 427-430

Endocrine system, effect of anesthesia on, 443-458

effect of exogenous beta-endorphin on, 451-452

Endorphin system, effect of anesthesia on, 450-451

Endorphin(s), physiologic roles of, 450 Endotracheal intubation, in pediatric outpa-

tient surgery, 85–86
Enflurane, effect on evoked potentials, 484

effect on sympathetic nervous system, 423 for neuroanesthesia, 534 for outpatient surgery, 45

pediatric, 81 Epidural block, differential, for pain relief,

Epidural blood patch, for PLPH, 108–109 Erythrocytosis, causes and symptoms of, 370 Estrogen(s), effect of anesthesia on, 446–447 function of, 366

Ethics, and legal perspectives, in medical practice, case studies, 675-688

Etomidate, effect on adrenal function, 259–261

for neuroanesthesia, 532 for outpatient surgery, 42

Evoked potential monitoring, anesthetic variables that influence, 483–485 instrumentation and techniques of, 478 intraoperative, during neurosurgery, 477–

types of, 478-483

Evoked potential(s), somatosensory, 481–483 Evoked response(s), brainstem, 479–481 visual, 478–479

Exhalation valve PEEP device, 765-768 Expiratory valve, in IMV system, 741-742 Extravascular lung water (EVLW), and alveolar-capillary permeability measurements, 835–836

Fenfluramine, for carcinoid tumors, 318

Fentanyl, effect on evoked potentials, 483 effect on sympathetic nervous system, 425 for neuroanesthesia, 532–533

for outpatient surgery, 43 for preoperative sedation, 102

Flow resistor(s), 757–760

Fluid and electrolyte management, in neurosurgical patients, 491-505 complications of, 502-503

role of diuretic agents in, 495–502 Fluid balance, effect on evoked potentials,

485
Fluid management, following central nervous system trauma, 572

FRC. See Functional residual capacity. Full ventilatory support (FVS), in PPV, 728–729

Functional residual capacity (FRC), extremes in, and impending ventilatory failure, 723

increased, PEEP and, 778 FVS. See Full ventilatory support.

Gas monitoring, anesthetic, during neuro-

surgery, 469
Gas source, in IMV system, 740–741

Gastrokinetic agents, in preanesthetic preparation for outpatient surgery, 39

Gestational trophoblastic neoplasm(s), 371-374

Glasgow Coma Scale, 571, 641 Glucocorticoid deficiency, 252-253

Glucocorticoid supplementation, perioperative, risks of, 256–257 stress and, 254–256

Glucocorticoid(s), excess, results of, 249-251 physiology of, 245-248

Glucose metabolism, disorders of, 339–356 Glycopyrrolate, in outpatient surgery, 38

Gonadal hormone(s), excessive or abnormal production of, 366–371

physiology of, 365–366 Gonadotropins, effect of anesthesia on, 448–

Gunshot wound(s), to head, treatment of, 566

Half-life, determination of, 703–709 Halothane, effect on sympathetic nervous system, 421–423 Halothane (Continued)

for neuroanesthesia, 533

for outpatient surgery, 44-45

for pediatric dental outpatient surgery, 182-183

for podiatri

for pediatric outpatient surgery, 81 Hamilton ventilator exhalation valve PEEP device, 767

Head, malignancy of, neurosurgical interventions for pain relief, 624-626

Head trauma, cardiovascular abnormalities following, 507-510

cardiovascular assessment following, 571-572

control of intracranial pressure following, 573-574

fluid and electrolyte management in patients with, 498-499

fluid resuscitation following, 572

hyperventilation following, and metabolic response, 660–661

intraoperative management following, 575–577

metabolic responses to, 657–659 neuroanesthesia for, 536–537 neurologic assessment following, 574 neuroradiologic testing following, 575 pediatric neuroanesthesia for, 561 respiratory care following, 568–575 respiratory changes following, 512–516 steroid administration following, and met-

abolic response, 661–662 surgery for, anesthetic agents for, 576 complications following, 577–578

complications following, 577–578 therapy and prognosis, 566–578 Headache(s), epidural blood patch for, 108–

postlumbar puncture (PLPH), as result of nerve blocks, 104–105

Heart murmur, and pediatric outpatient sur-

Hematoma(s), epidural, traumatic, treatment of, 566-567

intracerebral, causes of, 567

subdural, traumatic, treatment of, 567 Herpes zoster, diagnosis and management

of, 194
HFV. See Ventilation, high-frequency.
High pressure-generating mechanical de-

vices, 710-712 Histamine, role of, in carcinoid syndrome, 321-323

Histamine receptor-blocking agents, 322 Hormone secretion. See also Ectopic hormone secretion.

ectopic, 379-394

Hormone(s). See specific types, e.g., Gonadal hormones, Sex hormones.

H-2-receptor histamine antagonists, in preanesthetic preparation for outpatient surgery, 39 Human choriogonadotropin, function of, 366 Humidifier(s), role of, in IMV system, 742 Hydrocephalus, following spinal cord injury, 517

pediatric neurosurgery for, 553–556 Hyperaldosteronism, primary, as result of mineralocorticoid excess. 251–252

mineralocorticoid excess, 251–252 secondary, reproductive tumors and, 369– 370

Hypercalcemia, paraendocrine, 367–368 Hypercholesterolemia, familial, 310–311

Hyperglycemia, in perioperative diabetic management, 343-344

perioperative management of, 361–362 Hyperlipidemia(s), anesthetic implications of, 306–311

drugs for, 306, 308-309

Hyperlipoproteinemia, Type III, 306–310 Type IV, 311

Hyperoxia, alveolar, and ALI, 801

Hyperparathyroidism, intraoperative and postoperative considerations, 291–293 manifestations of, 288–293 preoperative considerations, 290–291

Hyper-reflexia, autonomic, following spinal shock, 594–595

Hypertension, and ambulatory surgery, 147–148

following neurosurgery, 644-645 intraoperative, in carcinoid patients, 329-330

pregnancy-induced, in molar pregnancy, 372

Hyperthermia, following neurosurgery, 646 malignant, 144

Hyperthyroidism, in molar pregnancy, 373 manifestations and preoperative management of, 279–281

Hyperventilation, and impending ventilatory failure, 722–723

and metabolic response, following head trauma, 660–661 Hypoaldosteronism, causes and characteris-

tics of, 253–254 Hypocalcemia, causes and clinical signs of, 293–294

Hypoglycemia, and anesthesia, 357-363

causes of, 340-341 in carcinoid patients, 331-332

intraoperative, and diabetics, 347–348 symptoms of, 359 types of, 357–358

Hypoparathyroidism, diagnosis of, 293–295 perioperative considerations, 295

Hypophysectomy, perioperative management of, 526-528

postoperative care, 648-649

Hypotension, following neurosurgery, 645–646

intraoperative, in carcinoid patients, 328-329 Hypothalamic-pituitary glands, abnormalities of, 521-529. See also Pituitary gland.

Hypothermia, following neurosurgery, 646 Hypothyroidism, manifestations and preoperative management of, 281–282

Hypoxemia, in spinal cord-injured patients, tracheal intubation for, 595–596 refractory, in ALI, 799

Hypoxia, following head trauma, 514-516

Implanted peripheral nerve stimulation, for chronic pain relief, 627

IMV. See Intermittent mandatory ventilation.

"Incompetency" diagnosis, ethical and legal perspectives of, 676-677

Infection, in diabetes mellitus, 343 upper respiratory, and pediatric outpatient surgery, 77–78

Infiltration block(s), in pediatric outpatient surgery, 66-69

Inflation hold, 733-734

Inhalational induction, in pediatric outpatient anesthesia, 80-82

Insulin, continuous intravenous, for perioperative management of diabetes mellitus, 350–352

in perioperative management of hyperglycemia, 361

Insulinoma, anesthesia for, 357-363
Internal equipment monitoring, 854-855

Intracranial pressure, control of following central nervous system trauma, 573– 574

effect of blood volume changes on, 496–497

Intracranial pressure monitoring, during neurosurgery, 471–472

Intramuscular induction, in pediatric outpatient anesthesia, 84 Intravenous induction, in pediatric outpa-

tient anesthesia, 82–84 Intraventricular opiates, for chronic pain re-

lief, 633 Ischemia, cerebral, in perioperative diabetic

management, 343–344 Isoflurane, effect on sympathetic nervous system, 423

for neuroanesthesia, 534

for outpatient surgery, 45

for pediatric outpatient surgery, 81–82 in perioperative management of intracranial tumors, 535

Jorgensen technique, for dental outpatient anesthesia, 178-179 Ketamine, for outpatient surgery, 42 for pediatric dental outpatient surgery, 183

for pediatric outpatient surgery, 84 Ketanserin, for carcinoid syndrome, 319 Ketoacidosis, diabetic, perioperative management of, 352–354

Kidney(s), function of, effect of spinal cord injury on, 595

Kinin(s), physiologic actions of, and carcinoid syndrome, 319–321 synthesis of, 320–321

Laparoscopy, complications of, 140 Left ventricular distensibility, alterations in, PEEP and, 782–783

Legal perspectives, and ethics, in medical practice, case studies, 675–688

Leukocyte interferon, for carcinoid tumors, 322-323

Lipoprotein disorders, 299–312 management of, 306–311 pathophysiology of, 302–306

Lipoprotein function, physiology of, 299– 302

Lipoprotein lipase deficiency, 306

Lipoprotein(s), human plasma, composition of, 300

Low pressure generating mechanical device(s), 709-710

Lung compliance, decreased, and impending ventilatory failure, 723

Lung failure, 720 Lung injury(ies), acute. See Acute lung in-

structural, HFV for, 883-884

Lung water, extravascular, effects of PEEP on, 780-781

Magnetic valve threshold resistor PEEP device, 765

Malpractice, medical, in outpatient anesthesiology, 228-229

Mammoplasty, augmentation, complications of, 141

Mannitol, in fluid and electrolyte management in neurosurgical patients, 495–496

Mask CPAP, 794–795

Mask induction, in pediatric outpatient surgery, 82

Meningocele, surgery for, anesthetic implications, 590-591

Meperidine, effect on evoked potentials, 483 Metabolism, response of, to ancillary interventions, in neurosurgical patients, 660-662

to head trauma, 657-659

to spinal cord injury, 659-660

Methohexital, for outpatient surgery, 42 pediatric, 83-85

Methysergide, for carcinoid syndrome, 318-319

Metochlopramide, in preanesthetic preparation for outpatient surgery, 39

Midazolam, for neuroanesthesia, 532 for outpatient surgery, 43

for preoperative sedation, 102 Mineralocorticoid deficiency, 253-254

Mineralocorticoid(s), excess, results of, 251-

physiology of, 248-249

Molar pregnancy(ies), endocrine complications of, 372–374

Monitoring system(s), surveillance of, 843-855

Monitor(s), electronic source, 843 pneumatic source, 844

Morphine, effect on sympathetic nervous system, 424-425

Morphine sulfate, for sedation of patients requiring ventilatory support, 732

Muscle relaxants, effect on sympathetic nervous system, 425-426

Mushroom-type exhalation valve PEEP device, 766

Myelomeningocele, surgery for, anesthetic implications, 590–591

Myelotomy, commissural, for chronic pain relief, 621

stereotactic, for chronic pain relief, 621

Narcotic(s), effect on sympathetic nervous system, 424-425

for neuroanesthesia, 532-533

in preanesthetic preparation for outpatient surgery, 39–40, 102

NCE. See Noncardiogenic edema.

Neoplasm(s). See specific types, e.g., Gestational trophoblastic neoplasms.

Nerve block(s), central, in outpatient surgery, 104-106

technical aspects of, 106-107

discharge criteria following, 132 dorsal, of penis, in pediatric outpatient

surgery, 69-70 femoral, in pediatric outpatient surgery,

64-66 ilioinguinal and iliohypogastric, in pediat-

ric outpatient surgery, 67-68 in differentiation of pain, 195-197

in outpatient surgery, 104-110

infiltration of incision and, 107-108 peripheral, for pain relief, 196-197

in outpatient anesthesia, 109–110 in pediatric outpatient surgery, 61–69

anesthetic selection and toxicity for, 66 nerve stimulators and neural blockade in, 61-62

sciatic, in pediatric outpatient surgery, 62-64

Nerve dysfunction, following neurosurgery, 647

Nerve(s), tumors of, surgical anesthesia for, 606

Nervous system, central, injuries of, and effects of positive airway pressure therapy, 814-815

Neuralgia(s), benign cranial, treatment of, 621-623

Neurectomy, peripheral, for chronic pain relief, 613

Neuroanesthesia, anesthetic agents for, 531-540

case studies from ethical and legal perspectives, 675-688

inhalational agents for, 533-534

intravenous agents for, 531-533 monitors in, 575

pediatric, 541-564. See also *Pediatric* neuroanesthesia.

practical, issue on, 463-688 role of nitrous oxide in, 538

Neuroendocrine response(s), to injury and trauma, 653–660

Neurologic deficit, following analgesic neurosurgery, 612–613

Neurologic disorders, in ectopic hormone syndromes, 385

Neurosurgery, analgesic, hazards of, 611-613

anesthetic gas monitoring during, 469 anesthetic monitoring during, 463–475 and circulation, 469–471

and oxygenation, and temperature, 471 and ventilation, 465-469

intracranial pressure monitoring during, 471–472

intraoperative evoked potential monitoring during, 477-489

role of, for management of chronic pain, 609-610

Neurosurgical patient(s), fluid and electrolyte management in, 491-505

nutritional support of, 653-673 future of, 670

goals of, 667-670 modalities in, 662-667

postanesthetic care of, 639-651 Neurotomy, percutaneous medial branch,

for chronic low back pain relief, 615–616

Nitrous oxide, for outpatient surgery, 44 dental, 175 pediatric, 81

in neuroanesthesia, 533, 538

Noncardiogenic edema (NCE), ARDS spectrum, of ALI, 797-800 Noninhalational induction, in pediatric outpatient anesthesia, agents for and techniques of, 82–84

Norepinephrine, half-life of, in serum, 418 regional distribution of, 416-417

Nursing, role of, in ambulatory surgery, 201-216

Nutritional support, of neurosurgical patients, 653-673

Ondine's syndrome, 517

Opiate(s), for chronic pain relief, 632–633 Opioid(s), and steroids, interaction between, 257–258

Outpatient anesthesia. See Anesthesia, outpatient.

Ovarian tumor(s), and carcinoid syndrome, 370

causing paraendocrine symptoms, management of, 371

Oximetry, in positive airway pressure therapy, 823

Oxygen, decreased, and impending ventilatory failure, 723-724

gaseous, monitoring of, 844-846

Oxygen pressure, arterial, effect on evoked potentials, 485

Oxygen radical(s), toxic, and ALI, 800-801 chemically mediated, 801-802

Oxygenation, and carbon dioxide elimination, in PPV, 822-824

tion, in PPV, 822-824 cerebral, following central nervous system trauma, 568-571

in PPV, 725

monitoring of, during neurosurgery, 463-465

Pain, chronic. See Chronic pain. differentiation of, diagnostic procedure for, 195–197

low-back, diagnosis and management of, 187–189

management of, in recovery room, 119-

myofascial, diagnosis and management of,

outpatient diagnosis and management of, 187-200

Pancreatic endocrine function, pathophysiology of, 340-341

physiology of, 339–340 Pancuronium bromide, effect on sympathetic nervous system, 426 in ventilatory care, 733

Panhypopituitarism, 523

Parachloroamphetamine (PCA), for carcinoid syndrome, 318

Parachlorophenylalanine (PCPA), for carcinoid syndrome, 318

Paraendocrine syndromes, 366-371 management of, 371

Parathyroid function, disorders of, 287-297 physiology of, 287-288

Partial ventilatory support (PVS), in PPV, 729-730

Pediatric neuroanesthesia, 541-564 emergence from and postoperative care, 551

551 euvolemic dehydration in, 544

fluid and blood replacement in, 548–549 for primary intracranial tumors, 556–557 induction of, 549–550 intubation for, 550

maintenance of, 550-551 monitoring in, 546-547

positioning of patient in, 543, 547 preoperative evaluation, 545–546 temperature control in, 547–548

ventilation in, 544

Pediatric neurosurgery, diagnostic procedures for, 562 for aneurysms of vein of Galen, 560-561

for craniosynostosis, 557–559 for head trauma, 561

for head trauma, 561 for hydrocephalus, 553-556

for spinal and cranial dysrhaphism, 551–553

for vascular malformations, 559–560 PEEP. See *Positive end expiratory pressure*. Peripheral nerve surgery, anesthesia for, 603–608

emergency, anesthesia for, 605

Peritonsillar infiltration, in pediatric outpatient surgery, 68-69

Phenothiazine(s), as histamine receptorblocking agents, 322

in preanesthetic preparation for outpatient surgery, 40

Pheochromocytoma(s), anesthesia for, 269-275

anesthetic implications of, 271-274 biology of, 271

normal sympathetic nervous system function and, 270-271

Physostigmine, for emergence delirium, 125 Pituitary ablation, for pain relief, 630–632

Pituitary gland, abnormalities of, 521-529 anatomy and physiology of, 521-523 clinical disorders of 523-526

clinical disorders of, 523–526 perioperative management of, 526–528 Pituitary tumor(s), 524–526

and endocrine disturbances, 523-524
PLPH. See Headache, postlumbar puncture.

Pneumatic tourniquet, in peripheral nerve surgery, 606-607

Positive airway pressure therapy, and alterations in hepatic and GI function, 815– 816

and alterations in renal function and water metabolism, 815

artificial airway complications in, 808 cerebral effects of, 814-815

complication and physiologic alterations of, 807–819

during transport, 868-870

issue on, 695-900. See also Positive pressure ventilation, Positive end expiratory pressure.

mechanical device dysfunction in, 807-808

monitoring techniques for patients receiving, 821-841

perioperative, pulmonary alterations with anesthesia in, 857–859 requirements of, 857–872

psychological effects of, 816 pulmonary barotrauma in, 809-813

pulmonary infection in, 808–809
Positive end expiratory pressure (PEEP),
and ventilatory weaning, 754

and ventilatory weaning, 754 cardiopulmonary effects of, 777–787 end points of, 790–793

for ARDS, 789-790 in ALI, 797-806

indications for, 789-790

therapeutic application of, 789–796 and spontaneous breathing, 793–794 in patients with unequal compliance,

in patients with unequal compliance, 793 with manual ventilation, 772

with mechanical ventilation, 770-772 Positive end expiratory pressure (PEEP) device(s), 757-775

classification of, 758

in perioperative airway pressure support, 865–866

physics of, 757-768

Positive pressure ventilation (PPV), capabilities of, 725-726

cardiovascular stabilization with, 727-728 clinical principles of, 717-736

disadvantages of, 726-727

discontinuance of, criteria for, 749–751 failure to accomplish, 753–754 procedure for, 751–753

full ventilatory support (FVS), method of, 728–729

indications for, 717-719 maintenance of, 728-733

new techniques of, 893-900

standard modes of, 737-747

oxygenation and, 725 physiologic alterations with, 726-727

PVS, method of, 729–730 role of cardiac function in, 829–830

clinical comparison of, 743-744

PPV. See Positive pressure ventilation.

Pregnancy-induced hypertension, in molar pregnancy, 372

Pressure, system, 697-699

Progesterone, effect of anesthesia on, 447-448

function of, 366

Psychosurgery, for chronic pain relief, 630 Pulmonary artery occluding pressure(s), PEEP and, 784–785

Pulmonary barotrauma, in positive airway pressure therapy, 809-813 manifestations of, 810

Pulmonary disease(s), complications of, in ambulatory surgery, 149-150

Pulmonary infection, in positive airway pressure therapy, 808-809

Pulmonary oxygen transfer, effects of PEEP on, 779-780

Pulse oximetry, features of, 466-468 PVS. See Partial ventilatory support.

Radicletomy, for chronic pain relief, 614-615

Ranitidine, in preanesthetic preparation for outpatient surgery, 39

Recovery room, ambulatory surgery, emergence delirium in, 125 nausea and vomiting in, 121–123

oral fluids in, 122–123
pain in, 119–121

postintubation croup in, 123–125 problems in, management of, 119–125 psychomotor testing in, 117–118 role of, 113–125

scoring systems in, 116-117 syncope in, 125

procedures of, for general outpatient anesthesia, 50

Rectal induction, in pediatric outpatient anesthesia, 84-85

Reflex automatism, following spinal shock, 594 Reflex sympathetic dystrophy, diagnosis and

management of, 190–194
Relaxants, for outpatient surgery, reversal

of, 48–49 intubation and, for outpatient surgery, 47–48

Renal transplant surgery, insulin administration for, 351

Reproductive endocrine disorders, 365–377 Resistor(s). See specific types.

Respiration, monitoring of, in operating room, 866-868

Respiratory failure, definition of, 719 Respiratory insufficiency, diagnosis of, following head trauma, 516

Respiratory rate, monitoring of, 848

Respiratory system, abnormalities in, following central nervous system derangements, 512-517

changes in, following neurosurgery, 642-644

disturbances in, during spinal shock, 592–594

function of, following spinal surgery, 600 Respiratory therapy, following head trauma, 516

Rhizidiotomy, for chronic pain relief, 614–615

Rhizotomy, classic, for chronic pain, alternatives to, 614-616

for chronic pain relief, 614

facet, for chronic low back pain relief, 615–616

percutaneous selective, for chronic pain relief, 615

Right ventricular function, effects of PEEP on, 782 Ring block, of penis, in pediatric outpatient

Ring block, of penis, in pediatric outpatient surgery, 69–70

Rostral pain, neurosurgical interventions for, 621-626

Scoring system, Aldrete, 117 in ambulatory surgery recovery room, role of, 116–117 Robertson, 118

Steward, 118 Sedation, intraoperative, and regional outpatient anesthesia, 102–103

preoperative, and regional outpatient anesthesia, 101-102

Seizure(s), following neurosurgery, 647 Serotonin, role of, in carcinoid syndrome, 314-317

Serotonin receptor-blocking agents, 318–319 Serotonin synthesis, inhibition of, in treatment of carcinoid syndrome, 318

Serotonin-depleting agents, 318

Sex hormones, effect of anesthesia on, 445-448

Shane technique, of dental outpatient anesthesia, 179

Siemens-Elema mainstream infrared CO<sub>2</sub> transducer, 847

Simple oscillatory mechanical system, 700–701

SIMV. See Ventilation, intermittent mandatory, synchronized.

Sitting position, neurosurgical patient in, fluid and electrolyte management in, 499

Sodium thiopental, for outpatient surgery, 41–42 pediatric, 83 Somatostatin, for carcinoid syndrome, 325 Spinal block, differential, for pain relief, 195–196

Spinal cord, anatomy of, 587-590 blood supply to, 588-590

Spinal cord injury(ies), acute phase of, 578–579

cardiovascular complications following, 510-511

chronic phase of, 583

effect of spinal shock on, 592–594 effect on kidney function, 595

electrolyte imbalance following, 581 intermediate phase of, 582–583

metabolic responses to, 659-660 monitoring of spinal cord function follow-

ing, 596-597 pathology of, 578

respiratory care following, 579–580 respiratory changes following, 517

spinal shock following, 580–581 therapy and prognosis, 578–583 to cervical region, 591–592

Spinal opiates, for chronic pain relief, 632-633

Spinal shock, cardiovascular disturbances during, 594

following spinal cord injury, 580-581, 592 respiratory disturbances during, 592-594 Spinal surgery, anesthetic management of,

587–601 postoperative care, 599–600, 649

Spondylolithesis, surgery for, 591 Spring-loaded threshold resistor PEEP device, 763–765

"Starling" curve, of preoperative laboratory testing, 28

Stereotactic surgery, postoperative care, 648 Steroid(s), and metabolic response, following head trauma. 661–662

and opioids, interaction between, 257–258 for replacement therapy perioperatively, 254–257

in inhibition of kinin synthesis, 320 Stimulation analgesia, for chronic pain relief,

626-629 Stress, perioperative, steroids for, 254-256 risks of, 256-257

Stress response, 420-421

effects of regional anesthesia on, 426–427 Subarachnoid hemorrhage, cardiovascular abnormalities following, 511–512

Succinylcholine, effect on evoked potentials, 484

effect on sympathetic nervous system, 425-426

Sufentanil, for neuroanesthesia, 533 Surgery, outpatient, anesthetic goals for,

Surgery, outpatient, anesthetic goals for, 97–98 collection of data in, complications of,

152-156, 158-159

Surgery (Continued) outpatient, complications of, 137-166 ambulatory unit's approach to, 139anesthetic, 141-147 patient education and, 137-139 procedural, 139-141 related to drug therapy, 150-151 related to patient's disease, 147-150 delivery of care in, 202-203 discharge criteria following, 129-133 discharge instructions following, 126evaluation practices, 18 follow-up care, 133 future of, 217-225 history and physical examination in, 16laboratory testing in, 20-30 abnormal results and predictive value

of, 22 abnormal results of, in "healthy" populations, 22–28 legal implications of, 157–160 nursing in, 207–213

quality assurance in, 213–214 postoperative management, discharge, and follow-up of, 113–136 preoperative evaluation for, 15–34

medicolegal rationale for, 28–30 patient questionnaire, 30–32 quality assurance in, 154–157 role of recovery room in, 113–125. See

also Recovery room, ambulatory surgery. scheduling in, 207

surgical follow-up report for, 161–165 unit for, designing of, 203–205 selection of personnel for, 205–207 stereotaxic, 629–630

Sympathectomy, for chronic pain relief, 613 Sympathetic nervous system, anatomy of, 411-412

effects of anesthesia on, 421–423 normal function of, and pheochromocytoma, 270–271

Sympathetic nervous system function, evaluation of, 412-413

Syncope, in ambulatory surgery recovery room, 125

Syndrome of inappropriate antidiuretic hormone (SIADH), 402–405 System pressure, 697–699

T piece, for pediatric patients, 86–87 Temperature, control of, in pediatric neuroanesthesia, 547–548 effect on evoked potentials, 484 inspired gas, monitoring of, 848 monitoring of, during neurosurgery, 471 Testosterone, effect of anesthesia on, 445– 446 function of, 365

Thermoregulatory system, changes in, following neurosurgery, 646

Thiopental, for pain relief, 197

Thoracic electric bioimpedance (TEB), estimation of cardiac output by, 830

Thoracic outlet syndrome, surgery for, 606 Threshold resistor(s), 760–768

Thyroid, physiology of, 277-279

Thyroid disease, pathophysiology of, 279– 283

Thyroid function, anesthetic considerations, intraoperative, and postoperative problems, 283–285 disorders of. 277–286

Thyroid hormone(s), effects of anesthesia and surgery on, 452–455

Thyroid nodule(s), and carcinoma, 282-283 Thyroid storm, 281

Thyrotoxicosis, in molar pregnancy, 372–373 Time constant concept, 703–709

Tonsillectomy, complications of, 140–141 Tracheal intubation, for hypoxemia, in spinal cord-injured patients, 595–596

Transairway pressure gradient, definition of, 720

Transcutaneous electrical nerve stimulation (TENS), for chronic pain relief, 626–627

Transience, following analgesic neurosurgery, 611–612

Transpulmonary pressure gradient, definition of, 721

Trauma, central nervous system, 565–585 head, fluid and electrolyte management in patients with, 498–499

Triazolam, for preoperative sedation, 102 Trophoblastic embolization, in molar pregnancy, 373

Trousseau's sign, 284-285, 292

Tumor(s). See also specific types. and cardiac abnormalities, 512 carcinoid. See Carcinoid tumor(s).

ectopic hormone-producing, anticancer drugs for, complications of, 390–392

in ectopic hormone syndromes, 380–383 clinical manifestations of affecting anesthetic management, 383–385

intracranial, perioperative management of, 534–536

malignant, of head and neck, neurosurgical interventions for pain relief, 624– 626

nerve, surgical anesthesia for, 606 of anterior third ventricular and suprachiasmatic regions, fluid and electrolyte management of, 501–502 of spine, surgery for, 599 pituitary, hypersecreting, clinical features of, 525 nonsecreting, 526 primary intracranial, in children, anes-

thetic management of, 556-557 prolactin-secreting, endocrine abnormalities and, 524

Underwater seal threshold resistor PEEP device, 761-762

Valium, for dental outpatient surgery, 175-

Vascular disorder(s), in ectopic hormone syndromes, 386

of brain, in children, surgery for, anesthetic management during, 559-560

Vascular surgery, effect of diabetes mellitus on, 346

Vasopressin, action of, physiology of, 395-400

deficiency of, 400-402 hypersecretion of, 402-405

Vasopressin function, abnormalities of, 395-

Vecuronium, for outpatient surgery, 47 Vein of Galen, aneurysms of, in children, surgery for, anesthetic management during, 560-561

Venous return, decreased, PEEP and, 781-

Ventilation, airway pressure release (APRV), 897-899 assist mode (AMV), 739-740

control mode (CMV), 738-739

deadspace, alterations in, PEEP and, 780 eucapnic, 730-731 extended mandatory minute (EMMV),

893-895 high-frequency (HFV), 873-891 applications of, 878-884 classification of, 875-877

gas transport mechanisms during, 877-

problems with, 884-888 techniques of, 873-875

in pediatric neuroanesthesia, 544

intermittent mandatory, synchronized (SIMV), 742-743

intermittent mandatory (IMV), 740-742 manual, PEEP with, 772

mechanical, PEEP with, 770-772 monitoring of, during neurosurgery, 465-

pressure support (PSV), 895-896

Ventilator discontinuance, 749-755 Ventilator maintenance, pharmacologic adjuncts with, 731-733

Ventilator pump failure, 720-722

Ventilator support, chronic, patients requiring, 754-755

Ventilator support device(s), lung, time constant concept in, 704-707 lung vs. mechanical, 701-703

mechanical, time constant concept in, 707-709

mechanics and physics of, 695-715 basic concepts, 695-697 essential equations for, 713-715

surveillance of, 843-855 Ventilator(s), anesthesia, control mechanisms of. 865

vs. critical care ventilators, in perioperative airway pressure support, 859-

critical care, vs. anesthesia ventilators, 859-864

patients' "fighting of", 731 volume-time-cycled, 737

Ventilatory mechanics, effects of PEEP on,

Ventilatory muscle fatigue, and impending ventilatory failure, 722-725 diagnosis of, 827

Volume monitor(s), 848-851

Weaning, from ventilatory support, 749-755 Wright respirometer, 849